



Buying Clinic

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BUYING CLINIC

If you need buying advice on hardware and software, write to:

Buying Clinic
Computer Shopper
30 Cleveland Street
London W1T 4JD
or email:

clinic@computershopper.co.uk

DISPLAYS DUAL USE

HOW DO I USE TWO MONITORS AT ONCE?

Q I have heard that Windows can support multiple monitors. What do I need to set this up and what's the point of it?

Kevin Etter

A Windows can support multiple display devices and extend the desktop across them. This means you can have, for example, a Word document open on one display and your email application on the other. Once you experience the ability to drag and drop windows between the two displays you'll wonder how you managed to get along before.

To use it you need a graphics card with dual outputs, which includes pretty much every graphics card on the market at the moment. You're unlikely to have two outputs only if you have

onboard graphics, in which case you'll need to buy either an AGP or PCI-E graphics card, depending on your PC. Most graphics cards have one digital and one analogue output, so you may need a DVI-to-analogue converter, which costs around £5 including VAT.

Next, you'll obviously need two monitors. You can use any displays. Once you have both monitors connected, just power up your PC and you should see the same picture in both monitors. When Windows starts, right-click on the desktop and select Properties. Click on the Settings tab, and you should see two screens with numbers in them (1 and 2). Click on either monitor to adjust its settings.

Click on 2 (your second monitor) and select Extend my Windows desktop on to this monitor. Click OK to apply, and your desktop will now span both displays.



▲ Windows lets you use two monitors together to extend your desktop

AUDIO ONLINE MUSIC STORES

NAPSTER OR iTUNES MUSIC STORE?

Q I'm thinking of buying music online using my broadband internet connection. I would like to be able to play music on my PC, listen to it on the train and also play it through my hi-fi. Friends have recommended the iTunes Music Store and Napster. Can either service provide what I want, and which is cheapest?

Johan Sobczyk

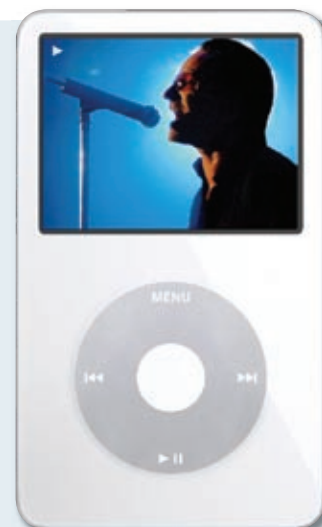
A Napster and the iTunes Music Store (iTMS) can be used to buy and listen to music in the ways that you want. How much it will cost depends on how much music you listen to and what equipment you buy.

The iTMS allows you to buy music tracks as you would in a shop. Most tracks cost 79p, and most albums cost £7.99. You can listen to purchased music on your computer and transfer it to an iPod player. Music purchased from iTMS cannot be played on other portable audio players, so if you don't already own an iPod you'll need to spend between £69 and £300 depending on how many songs you want to carry with you.

The iTMS allows you to burn music that you have bought to a CD, so you can then listen to it on your hi-fi. Alternatively, you can stream audio wirelessly from iTunes to an Airport Express wireless access point. The Airport Express costs £89, but does not include a remote control or any other way of choosing tracks when away from your computer.

Napster's two main services, Napster and Napster To Go, work in a different way. Rather than buying each track individually, you pay a monthly subscription that entitles you to access its entire music catalogue. If you end this subscription you will be unable to play any of the music you have downloaded. In order to listen to music on the train you'll need to subscribe to Napster To Go, which costs £15 per month.

Napster To Go allows you to listen to music on your computer and transfer it to any portable music player that supports DRM-protected WMA audio files. Many modern players support this kind of music, but the iPod doesn't. You can see a list of players at www.playsforsure.com. You can't burn Napster music to a CD without paying an additional fee to buy it first, so if you want to listen



▲ An iPod is great if you buy music from the iTunes Music Store, but useless if you use Napster To Go

to music through your hi-fi it's a good idea to buy a streaming media device. Players such as D-Link's DSM-320 and Roku's Soundbridge, both reviewed in *Labs, Shopper* December 2005, allow you to stream Napster music from your PC to a TV or hi-fi without needing to pay extra fees.



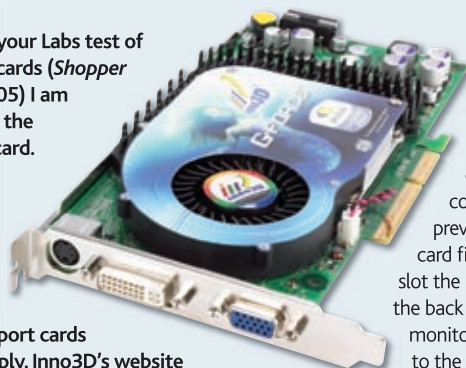
GRAPHICS CARD AGP VOLTAGE

WHICH GRAPHICS CARD DO I NEED?

Q After reading your Labs test of AGP graphics cards (*Shopper* November 2005) I am considering purchasing the Inno3D GeForce 6800 card. However, the manual for my Asus A7N8X-E motherboard says I must use an AGP card operating on a 1.5V power supply as the board won't support cards that require a 3.3V supply. Inno3D's website doesn't say which voltage the GeForce 6800 requires. Will it work with my motherboard?
Richard Bell

A Picking an AGP graphics card can be complicated. There are four speeds of AGP (1x, 2x, 4x and 8x) and two different voltages: 1.5V and 3.3V. All the AGP graphics cards in our recent group test use the AGP 8x standard and 1.5V.

To prevent people plugging a 3.3V card into a 1.5V board, or vice versa, most motherboards have a small plastic key inserted in their AGP slot.



▲ The Inno3D GeForce 6800 will work in any motherboard that is compatible with AGP 8x

This key fits into a notch on the graphics card's connector, and physically prevents the wrong kind of card fitting in. On a 3.3V AGP slot the key is placed closer to the back of the card, where the monitor cable is connected, than to the front. On a 1.5V slot the key is further away from the

back and closer to the front. Some motherboards, including the Asus A7N8X-E Deluxe, have an AGP slot that's extended at both ends. This allows them to accommodate the rare AGP Pro graphics cards. Slots without any key should serve both 3.3V and 1.5V cards.

If you ignore the extra connectors at each end, you'll see that the key on the Asus A7N8X-E's AGP slot is placed nearer to the front end than the back. This ensures that only 1.5V AGP cards can be fitted. As the Inno3D GeForce 6800 is a 1.5V card, it should work perfectly.

DISPLAYS CONNECTIONS

CAN I USE HDMI?

Q I want to buy an LCD TV and have found one that is HD-ready, as *Shopper* recommends. However, it has an HDMI input, but no DVI input for my PC. What is this and is there some way of using it with my PC?
James Browning

A HDMI is the new digital video connector. The cable looks a little like a USB cable and is easier to connect than DVI. In future, set-top boxes and DVD players will connect to TVs using this connector.

As well as digital video, HDMI also carries surround sound over the same cable, so you need only a single connection for sound and video. By contrast, DVI can carry only video. HDMI connections also support HDCP, which is the new Digital Rights Management system put in place to protect High-Definition content.

Fortunately, HDMI is compatible with DVI, though you'll lose the sound input. To get your PC working with the TV you need a DVI to HDMI converter, which costs around £22 including VAT from www.morecomputers.co.uk.



▲ If your TV has an HDMI input you'll need a converter cable to use it with your PC

PROJECTOR SPECIFICATIONS

WHAT'S THE DIFFERENCE BETWEEN DLP AND LCD?

Q I'm going to buy a projector for watching films, and I have noticed that DLP and LCD models are available. Which technology is the best?
Darren Lacey

A This is quite a tough question to answer because both technologies have their advantages. DLP uses a single chip made up of thousands of tiny mirrors (one per pixel). By adjusting the angle of the mirrors a pixel can be turned on and off and by doing it rapidly you can get different shades. The mirror mechanism isn't prone to light leaking where it shouldn't so DLP projectors have a high contrast ratio: blacks are black and whites are white. As a single chip does all the work, DLP projectors are cost effective and generating a bigger picture is relatively easy too.

Colour is created by shining the image through a rotating colour wheel. By doing this three times (once each for red, green and blue), a colour image is built up. The process is done very quickly, but building a picture out of three colour frames leads to the rainbow effect. This occurs when you move your head quickly to the left or right and see a rainbow flash of colour across the screen. It's particularly noticeable on fast-moving scenes such as in movies. Three-chip DLP projectors combat this by generating all three colour frames at once, but they're a lot more expensive.



▲ An LCD projector will take care of all your home cinema needs

LCD projectors use three LCD screens (red, green and blue), through which light is shone. The result is combined at the end and the full colour image is projected on the wall. The result is excellent colour reproduction, but light leakage means you get lower contrast ratios.

When you project a large screen you can often see the gaps between pixels, so the picture looks as if it's made up of lots of small blocks. LCD, however, is generally cheaper than DLP.

Unless you have money to burn, we currently recommend LCD for home cinema, as it's a lot more affordable and copes well with moving images. Our recommended projector is Panasonic's PT-AE700, which costs £971 including VAT from www.pixmania.co.uk.

It uses three LCDs, has an HDMI input and a resolution of 1,280x720, so it will support HDTV when it's launched. **CS**



PC Hardware Annoyances

If you send our star letter, you'll receive a prize. This month's winner gets a copy of O'Reilly's *PC Hardware Annoyances*, which will help you fix any hardware problems your PC is experiencing. If you don't want to spend the rest of your life troubleshooting, keep this book next to your PC along with the latest copy of *Computer Shopper*. You will find that all your PC woes disappear.